

Safety & Health for the Commonwealth

MASSACHUSETTS Division Of Occupational Safety
Asbestos & Lead Program

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Environmental Air Sampling as an Asbestos Assessment Tool

A flooring contractor replaces 12,000 square feet of asbestos containing floor tile in the corridors of a middle school aided by the use of a power chipper.

A grade school is made Internet ready by cabling through a seldom used basement storage area and its associated asbestos contaminated crawl space.

A demolition contractor tears down walls in a wing of an occupied office building.



Is It Safe?

Each of these events had the same outcome...the unintentional release of asbestos fibers into occupied spaces. Despite the fact that such incidents are easily prevented by an effective Operations and Maintenance Program, they are an all too common occurrence. In some instances, the potential hazard is immediately recognized, and a cleanup is performed by an asbestos contractor. In other cases, school staff perform the cleanup. Sometimes considerable time passes before the potential asbestos exposure hazard is actually recognized. When an asbestos spill has occurred in a school, parents, school administrators and occupants often want to use an "air test" to determine whether the building is safe for occupancy or whether an asbestos contractor is needed to perform a clean-up. While the Massachusetts Division of Occupational Safety believes that asbestos air monitoring can provide useful information for answering the question, "Is it safe?" it also recognizes that many factors, including the methods used to collect and analyze the samples, can strongly affect air monitoring results. This article will present a brief discussion of some of these factors.

How an asbestos air sample is collected can strongly influence the results, but deciding on a collection method can in-of-itself present a kind of "catch-22." Because air monitoring will only measure asbestos fibers that are suspended in the air when the sample is taken, fibers that have previously

settled to floors and other horizontal surfaces will not usually be measured. For this reason, even seriously contaminated areas will sometimes produce a "negative" air test. To permit sampling of settled dust in the asbestos abatement setting, the air in the work area is deliberately agitated with leaf blowers or similar devices just prior to collection of clearance air samples. This allows any respirable asbestos fibers present in the settled dust to be captured by air sampling equipment and measured. In the abatement setting, the use of "aggressive sampling" is safe because building occupants are protected from the re-suspended dust by the plastic sheeting or other barriers that the contractor uses to contain the work area. In other situations where barriers are not used, re-suspended dust produced by aggressive sampling can actually create an asbestos exposure hazard.

Because aggressive sampling can produce elevated air levels of asbestos and redistribution of asbestos dust, it should never be used in occupied spaces. Its use can only be recommended for unoccupied, contained spaces, which will subsequently undergo a thorough cleaning prior to re-occupancy, in the event of an elevated result.

Where aggressive sampling cannot be used, non-aggressive sampling is usually conducted during periods of normal area activity. When this is done, the results will most likely approximate the normal day-to-day asbestos exposure of persons occupy-

ing the area. They may not reflect the higher exposure levels associated with renovation, moving or other incidental activity which causes re-suspension of settled dust, however.

The method used to analyze the samples also figures prominently in the way air monitoring results are interpreted. Samples are typically analyzed by either phase contrast (light) microscopy ("PCM") or transmission electron microscopy ("TEM").

PCM methods have the advantages of being less costly, technically more simple and adaptable to on-site use. However, PCM lacks the optical resolution necessary for visualization of the very small diameter asbestos fibers commonly found in buildings, and it cannot discriminate between asbestos and non-asbestos fibers. These limitations do not seriously diminish the usefulness of PCM for analysis of post abatement clearance samples because the asbestos fibers released during abatement work are frequently larger and because most regulations require that asbestos work areas be cleaned of all dust, not just asbestos dust. It is noteworthy that the federal Asbestos Hazard Emergency Response Act (AHERA) continues to allow the use of PCM for clearance of smaller asbestos projects in schools. The limitations of PCM can seriously diminish its usefulness for assessment of sites where the asbestos fibers are small and where non-asbestos fibers constitute a significant percentage of the total fibers present. In schools, cellulose

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The Asbestos Ban and Phaseout Rule

The presence of asbestos containing materials in buildings remains a source of concern for many building owners and public facilities managers including Local Education Agencies responsible for public and private schools. Asbestos was incorporated into over two thousand building and consumer products due to its unique properties, including fire and heat resistance and high tensile strength. Some of these products are listed in the chart below.

To reduce the asbestos hazards of manufactured products, EPA introduced the “Asbestos Ban and Phaseout Rule” (40 CMR 763, Subpart I, sec. 762.160-763.179) in July 1989. The purpose of this rule was to ban the U.S. manufacture, importation, processing or distribution in commerce of many asbestos-containing product categories. However, the rule was challenged in court, and much of the original rule was overturned. Only portions of the rule were put into effect. The Consumer Safety Product Commission (CSPC) also played a large role in prohibiting the use of asbestos in a wide variety of consumer products.

Six asbestos containing product categories are still subject to the asbestos ban under the Toxic Substance Control Act (TSCA), a federal regulation. These include *corrugated paper; rollboard; commercial paper; specialty paper; flooring felt; and new uses of asbestos.*

This rule and other regulations currently prohibit the use of certain asbestos-containing materials in buildings, such as:

- Spray-applied asbestos coatings for fireproofing and insulating purposes (banned in 1973). Spray-applied asbestos coatings for decorative purposes were banned in 1978 under a revision of the EPA National Emissions Standard for Hazardous Air Pollutants (NESHAP).*
- The installation of wet-applied and pre-formed asbestos insulation was banned in 1975, also as part of the NESHAP regulation. This banned all types of insulation and “mud” type material on heating pipes, boiler coverings and components.*
- The use of asbestos in artificial logs for gas-burning fireplace systems was banned in 1977.*
- The use of asbestos in spackle and joint compound was banned in 1978.*

Products such as vinyl asbestos floor tile (VAT), roofing shingles and transite exterior siding can still be lawfully installed in new or existing buildings. To verify if products installed may contain asbestos, building owners should check the packaging (boxes, labels, etc.) or the manufacturer’s product information sheet.

If you have asbestos in your building, or uncover asbestos-containing materials during remodeling or renovation, EPA advocates an in-place management program. A common misconception is that if asbestos is in your building, it must be removed. It is **not** against the law to have asbestos in your building. It **is** against the law to re-apply certain asbestos-containing materials. Asbestos that can be managed in place, and maintained in good condition can remain in the building until a situation arises where it must be removed as a matter of law. Any asbestos materials should be periodically inspected for signs of damage or deterioration, and repaired as necessary. Remember that any work to remove or repair asbestos materials must be done by ~~trained and certified asbestos professionals.~~

Most Common AHERA Violations

During the past several years, the Division of Occupational Safety (DOS) has found that Massachusetts schools (K-12) share many common AHERA violations. How does your local education agency (LEA) compare?

AHERA is the Asbestos Hazard Emergency Response Act enacted by Congress in 1989.

- Failure to designate a person to ensure that the AHERA requirements are implemented.*
- Failure to inform workers or the building occupants at least once a year about inspections, response actions, and post-response action activities that are planned or in progress.*
- Failure to notify parents, teachers or organizations annually of the Management Plan’s availability.*
- Failure to conduct or document the 6-month periodic surveillance of school buildings.*
- Failure to provide appropriate training for maintenance/custodial staff.*
- Failure to post asbestos warning labels in routine maintenance areas (boiler rooms).*
- Failure to maintain complete records on removals/repairs, fiber release episodes, operations & maintenance activities.*
- Failure to document that accredited personnel performed asbestos related activities in the school, including laboratories analyzing samples.*
- Failure to conduct the 3-year reinspection.*

Monetary penalties for violations of AHERA may be up to \$5,000 per day per violation.

Some Common Asbestos Containing Building Materials

NOTE: This is only a partial list of possible asbestos-containing building materials. It is intended as a general guide to show which types of materials may contain asbestos.

Cement Pipes
Cement Wallboard
Cement Siding
Asphalt Floor tile
Vinyl Floor tile
Vinyl Sheet Flooring
Flooring Backing
Construction Mastics (floor tile, carpet, ceiling tile, etc.)
Acoustical Plaster
Decorative Plaster
Textured Paints/Coatings
Ceiling Tiles and Lay-in Panels
Spray-Applied Insulation
Blown-in Insulation
Fireproofing Materials Taping Compounds (thermal)

Packing Materials (for wall/floor penetrations)
Laboratory Hoods/Table Tops
Laboratory Gloves
Fire Blankets
Fire Curtains
Elevator Equipment Panels
Elevator Brake Shoes
HVAC Duct Insulation
Boiler Insulation
Breeching Insulation
Ductwork Flexible Fabric connections
Cooling Towers
Pipe Insulation (corrugated, air-cell, block etc)
Heating & Electrical Ducts
Electrical Cloth

Electric Wiring Insulation
Chalkboards
Roofing Shingles
Roofing Felt
Base Flashing
Thermal Paper Products
Fire Doors
Caulking/Putties
Adhesives
Wallboard
Joint Compounds
Vinyl Wall Coverings
Spackling Compounds
High Temperature Gaskets
Electrical Panel Partitions

"406b" Pre-Renovation Lead Information Rule (PLIR):

Renovations Disturbing Lead Paint Require Disclosure to Homeowners and Tenants

What is this law about?

Effective June 1, 1999, the U.S.E.P.A. instituted a new regulation that requires renovators who disturb lead paint in target housing built prior to 1978, to distribute a lead hazard pamphlet to owners and occupants. This pamphlet, also known as the Red, White & Blue book, is entitled *Protect Your Family From Lead in Your Home*. This pamphlet discusses ways in which occupants can protect themselves and their families from lead-based paint hazards.

When does it apply?

This rule applies to you when:

- your work involves pre-1978 houses or apartments
- you receive any form of compensation for your work
- you disturb more than 2 square feet of lead-painted surfaces
- your work is not specifically excluded from this law

Compensation extends beyond money. Providing services in exchange for other services (e.g. bartering) is included. This

applies to owners renovating their own apartment buildings using maintenance staff, as well as neighborhood handymen providing services to local residents for services or goods other than money.

Why regulate renovation/remodeling?

Lead exposure risks can occur during renovations of housing containing lead-based paint unless certain safety measures are taken. The new rule (40 CFR 745, Subpart L) was promulgated to protect families from exposure to the hazards of lead-based paint through regulations, education and other activities.

The pre-renovation lead information rule (PLIR) differentiates between renovation activities and excluded activities.

Renovation is the modification of any existing structure resulting in paint disturbance (except abatement). Some examples include *removal/modification of painted surfaces, removal of large structures, and window replacement*. Excluded activities include lead abatement work, minor housing repairs and maintenance work, and/or

emergency renovation performed in housing that has already been determined by a certified lead inspector to be lead free.

Who is affected by this rule?

- ? Carpenters
- ? Renovators & Remodelers
- ? Electricians
- ? Painters
- ? Home Improvement Contractors
- ? Landlords/Property Managers
- ? Apartment Maintenance Staff
- ? Anyone whose work disturbs lead paint

For more information on the 406 Rule, visit the EPA website, www.epa.gov/lead or contact DOS



Environmental Air Sampling

from page 1

fibers from paper could artificially inflate the air monitoring results when PCM is used for analysis. Also, PCM analysis could be expected to miss the small asbestos fibers typically released during the wearing of vinyl asbestos floor tile.

Although TEM methods of analysis of asbestos air samples are more costly and time-consuming than PCM methods, they do allow the visualization and counting of the smallest asbestos fibers, and they are capable of discriminating between asbestos and non-asbestos fibers. TEM is therefore the method of choice for assessment purposes.

Regardless of the method used for the analysis of asbestos air samples, the results require comparison with appropriate standards to be meaningful. As officially recognized non-occupational exposure standards for airborne asbestos do not exist, regulators and consultants have increasingly used the AHERA abatement project clearance standards of 0.01 fibers per cc (cubic centi-

meter) of air for PCM and 70 structures per square mm (millimeter) for TEM as benchmarks for hazard assessment, i.e., in the evaluation of where an abatement would be required or recommended. Whether clearance standards should be used as *de facto* non-occupational exposure standards in this way is a philosophical and a scientific question which is well beyond the scope of this article. Complicating the issue is the fact that a true risk-based exposure threshold for asbestos illness has yet to receive any official recognition. And, because of the ubiquity of asbestos as an environmental contaminant, "zero" air levels are only rarely, if ever, observed, although buildings that are supposedly asbestos-free generally have lower ambient air levels than buildings that contain asbestos. In many cases, it may be helpful to compare the results of airborne asbestos sampling with authoritative risk data, such as that presented in the Health Effects Institute Report on Asbestos in Public and Commercial Buildings. On a practical level, an airborne asbestos fiber level that is well above the corresponding TEM clearance level of 70 structures per square mm would certainly be suggestive of an asbestos hazard which will require cleanup by an asbestos contractor. On the

other hand, a level at or below this benchmark would be indicative of a lower order of risk, although the limitations related to sampling noted above should always be considered whenever apparently "negative" results are obtained.

It should also be recognized that the results of environmental air sampling by themselves are rarely sufficient to assess the potential for asbestos exposure of any given situation. Usually, a competent evaluation of all risk factors at the site and a comparison of the effectiveness of various management strategies are indispensable components of any asbestos hazard assessment. Among the factors to be considered are: the total amount of asbestos-containing material present; the asbestos content, condition and friability of the material; its accessibility and positioning, including presence in, or proximity to, an airstream or plenum; potential for future damage or deterioration; and the effectiveness of various control options which stop short of full abatement, such as operations and maintenance work. Only after a full consideration of these factors can the question, "Is it safe?" confidently be answered.

Reader Survey

Please take a moment to complete our survey so that we may better serve you

Reader Response Form

Did you find this newsletter useful?

I would like more information about:

- ☐ Indoor Air Quality
- ☐ Asbestos and AHERA
- ☐ Lead in Renovation and Construction Issues
- ☐ Other (please list)

Do you have a specific question/topic you would like us to address?

I would like to be contacted for the next available asbestos training :

- ☐ Asbestos Awareness Training
- ☐ Asbestos-Associated Project Worker
- ☐ AHERA Designated Person Training

☐ Please add my name to your mailing list.

Name

Address

Phone

Please FAX us at (617) 727-7581 or Mail to: **Division of Occupational Safety
Asbestos & Lead Program
1001 Watertown Street, W. Newton, MA 02465
Att. Newsletter**



Helpful Telephone Numbers



Division of Occupational Safety

For questions regarding indoor air quality or to request an indoor air quality investigation

contact :

The Occupational Hygiene/Indoor Air Quality Program

Phone: 617-969-7177

Fax: 617-727-4581

For help with Asbestos, Lead or AHERA related matters or to request an asbestos or lead assessment, contact:

The Asbestos & Lead Program

Phone: 617-969-7177

Fax: 617-727-7581

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- For problems or assistance with the Massachusetts Asbestos or Lead Abatement Regulations, contact our field offices:
-
- **Asbestos & Lead Licensing and Enforcement Program**
- Complaints: 1-800-425-0004
-
-
- **Regional Offices**
- Boston 617-727-7047
- West Newton 617-969-7177
- Haverhill 978-372-9797
- New Bedford 508-984-3562
- Westborough 508-616-0461
- Springfield 413-781-2676
- Pittsfield 413-448-8746
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Allergies, Asthma and Building Housekeeping

In the school and office environments there are numerous sources of contamination that can cause or aggravate allergies, asthma or eye and nose irritation. Of the occupational asthma cases reported to the Massachusetts Department of Public Health, those most frequently cited include teachers, secretaries and other office workers. Many of the causes of allergies and asthma are biological in origin, and this article focuses largely on them.

Health Effects

Allergies - In its simplest form an allergy is the response of the immune system of an organism to something that it recognizes as a threat. The object of an allergic response is to protect the organism. The ability to respond allergically is usually inherited, and approximately forty percent of the population in this country can become allergic. The most common method of dealing with allergies is to eliminate the possibility of contact with the offending materials (called allergens).

Asthma - Attacks of bronchial asthma are usually brought on by breathing in a specific allergen. Asthma is a specific form of allergy and is chronic. Symptoms are more severe and there is often a characteristic "wheezing". It is frequently caused by the inhalation of airborne allergens such as pollen, spores, feathers, and animal dander. This also includes the presence of various allergens in dust.

Irritating Effects - Eye, nose and respiratory irritation that is not permanent can occur and even be recurrent when the materials themselves by their very nature have an irritating effect. These effects are more common to chemicals (especially cleaning chemicals such as ammonia and bleach).

Potential Sources of Problems

Introduction - All living things and their products decay, dry out and deteriorate into the environmental dust. The amount that they contribute to the dust is in direct proportion to the failure of efforts to maintain environmental cleanliness. Mice and other pests will often produce liquid waste in the process of excreting fecal pellets. We will see the droppings but the liquid evaporates leaving a protein residue, which becomes part of the dust. Roaches produce protein-containing liquid waste and scent chemicals (pheromones). They also dry up and become part of the dust. Recent studies have implicated the liquid waste of roaches in the

children.

All of these protein sources, which are part of the normal environmental dust, are the result of human activity and our interaction with the "critters" that live around us and because of us. Usually they are harmless. However, people can become allergic to some or all of these proteins in the dust. Eliminating, limiting and/or controlling the environmental dust is therefore very important for the protection of people who have allergies and asthma. As with most issues related to the human response to chemicals, "the poison is in the dose". Therefore, we should limit exposure to the greatest extent feasible.



Dust Mites - Dust mites are microscopic insects that live in the dust and fabrics that are found in occupied spaces. The mites live in the fabric of carpets, chairs, drapes and sound suppression and privacy panels. They live on (eat) the shed epidermal (skin) cells that are continually being shed by our bodies, animal dander, insects and insect parts and such other protein-containing materials that they may come upon. They also produce fecal pellets, which can become part of the dust. There have been seventeen separate allergens identified in the fecal pellets of the common dust mite.

Food and Vermin - Food, food products and food wastes can attract such environmental pests as rodents, roaches and other insects and their larva. The impact of these pests upon air quality is not usually related to their presence directly. Rather, it is due to their biological activities in their production of waste, and the fact that these waste products can become part of the environmental dust. Disturbed and distributed into the ambient air, they can have an impact on air quality and our reaction to it.

Garbage - Food, garbage and trash in waste cans should be kept to a minimum and taken out each night.

Plants and Mold - Plants are often pleasant additions to trouble-free indoor environments. However, they occasionally can be sources or vehicles for contamination by molds and insects, that view them as a home or as food.

Their presence in a building or an area that is experiencing air quality problems can be confusing and confounding. Too much water, or fertilizer, or too little of either can cause their own difficulties for both the plants and the environment. Often plants can be a source of water, which leads to the amplification of mold in the building. This agency has guidelines for dealing with mold and mildew in buildings (DOS bulletins 378 and 393). Where it is clear that this problem may be attributable to plants, the simple and most direct solution is to remove the plants.

Control Measures

Pest Control - Modern contracts for pest management call for integrated pest control. Chemical agents should not be placed in an environment unless there is evidence of pest activity. Glue boards can be used to demonstrate the presence or absence of pests. Chemical baits and sprays are then used in areas and at times of pest activity. The application of pest control material is usually done at a time when contact with pests can be expected to be maximized, while contact with human occupants will be minimized. All application work should be done at the end of the last work shift, or during the period of lowest activity in a continuous operation.

Dusting - Dusting should be performed at least once a month on all office furnishings. Furnishings include desktops, file cabinets, book-cases, lights, and HVAC grilles.

Floors - Non-porous flooring should be cleaned at least once a day. Floors should be cleaned during non-occupied hours to minimize dust exposure. Vacuuming and wet mopping are preferable to sweeping. Vacuuming should be performed with a modern, high efficiency type of vacuum cleaner.

Carpeting - For areas that are occupied and heavily trafficked, carpets should be vacuumed at the end of each day. Steam cleaning via a steam extraction method should be performed whenever the carpets are visibly dirty, but at least twice a year. If (when) carpets are worn and have exceeded their useful life, both the carpets and the padding should be removed and replaced. Carpets and carpet backing should be kept as dry as possible to prevent microbial growth. It may be prudent to avoid steam-cleaning carpets during humid weather, and to steam-clean without running a fan. (continued on page 6)

EPA Publishes Final Worker Protection Rule

Effective December 15, 2000, the EPA amended the Asbestos Worker Protection Rule (WPR) and the Asbestos-in-Schools Rule. The WPR amendment protects state and local government employees from the health risks of exposure to asbestos to the same extent as private sector workers by adopting for these employees the Asbestos Standards of the Occupational Safety and Health Administration (OSHA).

The WPR's coverage is extended to state and local government employees who are performing construction work, custodial work, and automotive brake and clutch repair work.

This final rule cross-references the OSHA Asbestos Standards for Construction and for General Industry, so that future amendments to these OSHA standards are directly and equally effective for employees covered by the WPR. EPA also amends the Asbestos-in-Schools Rule to provide coverage under the WPR for employees of public local education agencies who perform operations, maintenance, and repair activities. EPA is issuing this final rule under section 6 of the Toxic Substances Control Act (TSCA).

You may be potentially affected by this action if you are a state or local government entity whose employees work with or near asbestos-containing material.

Potentially affected categories and entities: Allergies and Asthma....

(continued from page 5)

repeatedly wet should be removed. Non-porous flooring such as tile should be investigated as replacement in these cases.

General Building Maintenance - Custodial activities should be performed when building occupancy is at its lowest level. This is to prevent occupants from being exposed to potentially irritating custodial chemicals and airborne dust. Building maintenance services in the public sector should have an active Right-To-Know program. Building maintenance services in the private sector should have an active HazCom program. These programs should include maintaining all Material Safety Data Sheets (MSDS) on site for any custodial chemicals, active review of all MSDSs and a policy of substitution of less toxic materials where and whenever possible.

may include, but are not limited to: educational services, public educational institutions, including school districts, not subject to an OSHA-approved state asbestos plan or a state asbestos worker protection plan that EPA has determined is exempt from the requirements of the WPR. Public administration state or local government employers not subject to an OSHA-approved State asbestos plan or a state asbestos worker protection plan that EPA has determined is exempt from the requirements of the WPR.. To determine whether you or your business is affected by this action, you should carefully examine the applicability provisions in 40 CFR 763.121.

You may obtain electronic copies of this document, and certain other related documents from the EPA Internet Home Page at <http://www.epa.gov/>. To access this document, on the Home Page select "Laws and Regulations," "Regulations and Proposed Rules," and then look up the entry for this document under the "Federal Register—Environmental Documents." You can also go directly to the **Federal Register** listings at <http://www.epa.gov/fedrgstr/>. To access information about asbestos, go directly to the Asbestos Home Page for the Office of Pollution Prevention and Toxics at <http://www.epa.gov/asbestos/>.

Asbestos Project Designs

Project Designs must be prepared for all Asbestos Response Actions conducted in schools and facilities subject to the federal EPA AHERA regulation. In view of the potential exposure risks occasioned by improperly designed abatements in schools, DOS believes that this requirement is appropriate and reasonable. DOS does not require that Project Designs be prepared for abatements conducted in non-AHERA facilities. However any Project Design, whether prepared for an AHERA or non-AHERA facility, **must** be prepared by a certified Asbestos Project Designer.

In making a determination as to whether a work specification is a Project Design, DOS will consider whether

Helpful Reference Sources on the Web



www.state.ma.us/dos - MA Division of Occupational Safety, Asbestos/Lead Program, Occupational Hygiene/Indoor Air Quality

Program site. Contains information on all the DOS programs and services.

www.epa.gov -US Environmental Protection Agency. Contains many links to information on IAQ issues, asbestos, lead, toxins, etc. as well as guidance documents, press releases, frequently asked questions.

www.osha.gov -Occupational Safety & Health Administration. Contains guidance on OSHA compliance, including directives and interpretations on worker health and safety. Model programs available for Respiratory Protection, PPE, Hazcom, etc..

www.cdc.gov/niosh -National Institute for Occupational Safety and Health. NIOSH conducts research for various government agencies, provides epidemiological studies, and provides recommendations for occupational safety and health.

www.state.ma.us/dep -MA Department of Environmental Protection. Contains information on recent penalty activities for violators.

www.hud.gov/lea -US Housing & Urban Development. Contains federal lead regulations, guidance documents, press releases, frequently asked questions related to housing

its preparation was rendered as a compensated, professional service, whether the specification emphasizes how the work is to be conducted, and whether the specifics of the abatement plan are tailored to a particular site. A specification submitted by a contractor as part of a proposal or contract, particularly one focused on deliverables, such as the work to be performed and the coverings to be abated, would not necessarily constitute a Project Design. In addition, DOS is less likely to determine that a specification containing generic information pertaining to safety and health programs, not tailored to a specific site, is a Project Design.

Massachusetts Moderate Risk Deleading A new option for Property Owners

Homeowners and landlords now have a new, more cost-effective option for complying with the Commonwealth's lead law. Under the moderate risk deleading regulations, which have been fully effective for about one year, whole component replacement work and certain other deleading operations which do not involve extensive scraping or other surface preparation may be conducted under relaxed regulatory standards. In lieu of having to hire a deleading contractor, residential property owners and their agents may undertake moderate risk deleading work in the owner's properties after taking the one-day training course specified by 105 CMR 460.000 and becoming certified by the Childhood Lead Poisoning Prevention Program. Contractors may undertake moderate risk deleading work after completing the two-day "Lead-Safe Renovator" training course (one-day for workers) specified by 454 CMR 22.00 and becoming licensed by the Division of Occupational Safety. Because of the lower order of lead exposure risk and the narrowed scope of moderate risk deleading work, medical monitoring standards for persons engaging in the work are also relaxed. However, employers are still subject to OSHA requirements for the medical monitoring and personal protection of employees.

Lowering the costs of deleading is one of the principal aims of the moderate risk deleading initiative. Because the replacement of windows and other components often constitutes a significant percentage of the total cost of a deleading project, lowering the costs associated with this work should result in more units being deleading and a safer living environment for children.

Increasing the quality and efficiency of deleading work is another aim of the moderate risk deleading initiatives. Under the new initiatives, carpenters with superior renovation skills, who have shunned licensure as deleader contractors in the past because of what they perceive as overly stringent requirements, may decide that the reduced training and medical monitoring prerequisites for Lead-Safe Renovator licensure are worth the access to deleading work and other business advantages that licensure confers. This will increase the overall quality and efficiency of deleading workmanship, especially where replacement is involved.

An anticipated benefit of lead safe licensure is that contractors who become trained in the lead-safe work methods of moderate risk deleading will transfer those skills to general renovation projects that are not deleading projects, *per se*. This will increase the lead safety of general renovation work.

Although only a small number of renovation contractors have been trained and certified as "Lead-Safe Renovators" to date, DOS expects the number to rapidly increase as the HUD 1012/1013 requirements are implemented. Under the 1012/1013 standards, lead safety training is required for persons conducting renovation work in federally-supported housing which contains lead paint.

Persons seeking more information on Moderate Risk Deleading and Lead-Safe Renovator training may call the asbestos and

HUD Lead -Based Paint Hazards in Homes—Federal Regulations Change

The U.S. Dept. of Housing & Urban Development (HUD) has issued a new regulation to protect young children from lead-based paint hazards in housing that is financially assisted by the federal government or being sold by the government.

Effective September 2000, the new regulation was issued under sections 1012 and 1013 of the Residential Lead-Based Paint Hazard Reduction Act of 1992 (Title X), and now appears within the Code of Federal Regulations, 24 CFR 35. This regulation consolidates all of the Department's lead-based paint regulations in one part of the Federal Regulations, making it easier to find HUD policy on the subject.

The regulation sets hazard reduction requirements that give much greater emphasis to reducing lead in house dust. Also, this regulation uses the framework of trained and/or certified lead-based paint professionals developed by the EPA, with the cooperation of most states for individuals performing risk assessments, lead based paint abatement and lead dust monitoring.

An additional requirement under this regulation is that maintenance staff and renovators must be trained in lead safe-work practices. For more information about this regulation visit the HUD website found at <http://www.hud.gov/lea>.

EPA Promulgates New Regulations for Renovation in Homes

The EPA's rule on Identification of Dangerous Levels of Lead, issued under the Toxic Substances Control Act section 403, was published in the January 5, 2001 Federal Register (Vol. 66) at pages 1205-1240. It can be downloaded from the Federal Register Online via GPO Access <http://www.access.gpo.gov/su_docs/aces/aces140.html>.

The rule gives the criteria for identifying paint-lead hazards (on specified friction, impact, chewable and other deteriorated surfaces), dust-lead hazards (40 ug/sq.ft. for interior carpeted and uncarpeted floors, and 250 ug/sq.ft. for window sills), and soil-lead hazards (400 ppm for bare play area soil, and 1,200 ppm for bare soil in the rest of the yard). The dust-lead hazard values are used for post-abatement clearance, with the window trough clearance standard being at 400 ug/sq.ft. The rule also specifies procedures for collecting samples for risk assessments and post-abatement clearance.



Division of Occupational Safety

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Commonwealth of Massachusetts Division of Occupational Safety

Providing information and outreach on asbestos and lead issues is a primary mission of the Division of Occupational Safety.

Since our last edition of *Safety and Health for the Commonwealth*, several major regulations dealing with asbestos and lead issues have been promulgated at both the state and federal levels. In this issue you will find information on EPA's Pre-Renovation Lead Information Rule (406b Rule); the Asbestos Ban & Phase Out Rule; and the Worker Protection Rule. Articles on HUD's 1012/1013 Rule and the Massachusetts' Moderate Risk Deleading Initiatives are also presented.

As always, the staff at the Division of Occupational Safety welcomes any questions or comments that you may have on any of the issues presented in this newsletter. Selected questions and the Divisions' responses may be printed in the "Question from our Readers" column, which will be presented in future edition..

If you would like to be added to our mailing list, please complete the Reader Survey inside.

With my best wishes for a safe and healthy new year,

Ernest W. Kelley
Asbestos/Lead Program Manager



Argeo Paul Cellucci,
Governor

Jane Swift,
Lieutenant Governor

Angelo Buonopane,
Director

Robert J. Prezioso,
Deputy Director

Ernest W. Kelley,
Program Manager

Mission Statement

The Division of Occupational Safety (DOS) mission is to prevent occupational injuries and illnesses in Massachusetts. We work with employers, employees, unions and government officials to create safe and healthy work environments through site visits, analytical testing, and the dissemination of information.